

Application No.: 10/805,224

Docket No.: 21854-00019-US1

AMENDMENTS TO THE CLAIMS

Claims 1-10 (canceled)

11. (currently amended) A biodegradable polymer ~~adapted to thermoform for thermoforming~~ rigid packaging products, said polymer consisting essentially of the following in percent by weight having the composition:

- a) 8 to 80% of a starch modified to include a hydroxyalkyl C₂₋₆ group or modified by reaction with an anhydride of a carboxylic acid,
- b) 4 to 11% of a water soluble polymer selected from polyvinylacetate and polyvinyl alcohol,
- c) up to 12% added water,
- d) 0 to 10% of a polyol plasticizer,
- e) 0.1 to 1.5% of a C₁₂₋₂₂ fatty acid or salt,
- f) the balance being a natural starch.

12. (previously presented) A biodegradable polymer as claimed in claim 11 wherein component e) comprises stearic acid.

13. (previously presented) A biodegradable polymer as claimed in claim 11 wherein component b) comprises a polyvinyl alcohol component.

14. (previously presented) A biodegradable polymer as claimed in claim 11 wherein the polyol plasticizer comprises glycerol.

15. (previously presented) A biodegradable polymer as claimed in claim 11 wherein the polyol plasticizer content is zero and added water is from 10 to 12%.

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16. (previously presented) A biodegradable polymer as claimed in claim 20 further comprising stearic acid.
17. (previously presented) A biodegradable polymer as claimed in claim 21 comprising polyvinyl alcohol.
18. (withdrawn) A process for forming a biodegradable polymer according to claim 11 comprising:
- a) forming a mixture of starch, a modified starch, a water soluble polymer or copolymer containing vinyl alcohols units, up to 20% of added water and a polyol plasticizer and 0.4 to 1.5% by weight of a C₁₂₋₂₂ fatty acid or salt;
 - b) working the mixture and forming a melt within the temperature range of 130°C to 160°C, and
 - c) reducing the temperature and further working the mixture and then extruding the mixture or injecting the mixture into a mold at a temperature of 85°C to 105°C without the need to remove water.
19. (withdrawn) A process for forming products as claimed in claim 18 wherein the polymer is extruded into a sheet and subsequently thermoformed into a packaging tray.
20. (currently amended) A biodegradable polymer suitable for use in thermoforming rigid packaging products, said polymer consisting essentially of the following in percent by weight comprising: a) 8-80% starch modified to include a hydroxyalkyl C₂₋₆ group or modified by reaction with an anhydride of a carboxylic acid; b) 4-11% of a water soluble polymer comprising polyvinylacetate and/or polyvinyl alcohol; c) up to 12% added water; d) 0-10% polyol plasticizer.
21. (withdrawn) A biodegradable polymer as claimed in claim 20, wherein d is substantially 0%.
22. (new) A polymer composition that has been adapted to form a film, said polymer

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composition consisting essentially of in percent by weight:

- a) 8 to 80% of a starch modified to include a hydroxyalkyl C2-6 group or modified by reaction with an anhydride of a carboxylic acid
- b) 4 to 11 % of a water soluble polymer selected from polyvinyl acetate, polyvinyl alcohol and copolymers of ethylene and vinyl alcohol
- c) 10 to 16% of a polyol plasticizer
- d) up to 12% added water
- e) 0.1 to 1.5% of a C12-22 fatty acid or salt
- f) the balance being a natural starch.

23. (new) A composition as claimed in claim 22 wherein component e) comprises stearic acid.

24. (new) A composition as claimed in claim 22 wherein component b) comprises a polyvinyl alcohol .

25. (new) A composition as claimed in claim 23 wherein component b) comprises a polyvinyl alcohol .